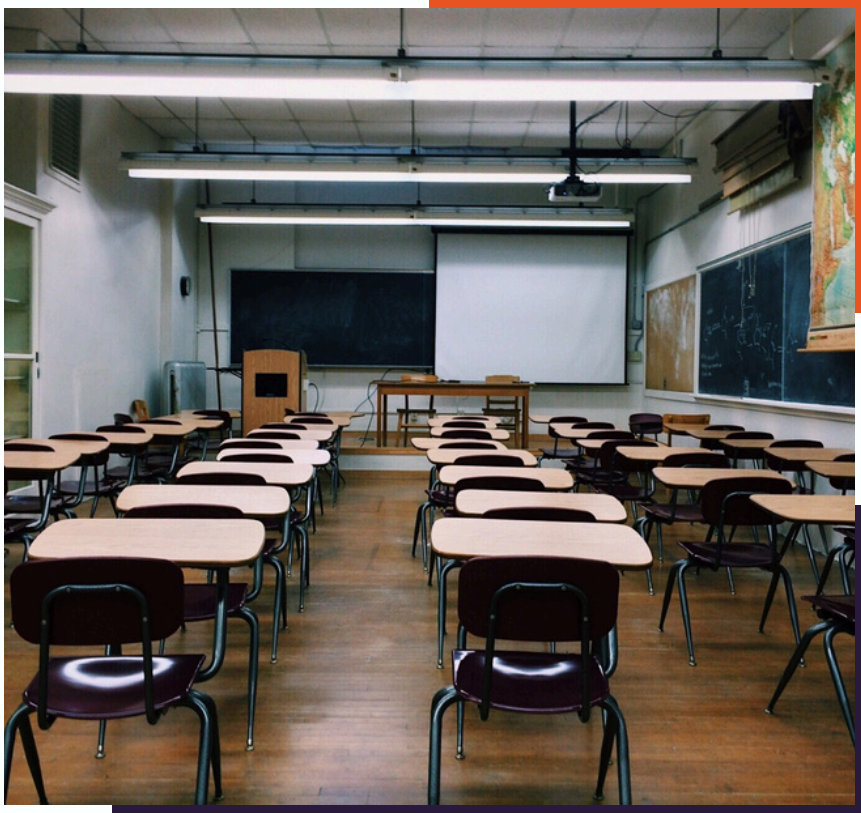
EDUCATION

Case Study Number: 23



Overview

- **Location:** Dublin 6 (Urban)
- **Size:** 250 m²
- **Constructed in:** 1894 (school since 1922)
- **BER Before:** Exempt | **BER After:** Exempt
- **Energy Savings:** 82,468 kWh (thermal)
- **Carbon Savings:** 6,650 kg CO_2 (from solar PV)
- **Display Energy Certificate:** N/A

A deep retrofit enhanced comfort, efficiency, and heritage in a protected school through thermal upgrades and renewables.

CHALLENGES

- No major planning or approval challenges were reported.
- Works were phased over 3 years to accommodate school operations and funding cycles.

SIMPLE PAYBACK

- **Total project cost:** €170,074 (excl. VAT, incl. professional fees)
- **Estimated payback:** ~7 years (excluding property value uplift)
- **Funding Mode:** Private + SEAI Community Energy Grant 2022 (€79,458)

ADDITIONAL INFORMATION

- Thermal and electrical upgrades improved comfort and operational performance.
- The solar PV system serves as a live educational tool for students.
- The project preserved the building's historic status while advancing sustainability goals.

Energy Upgrade Measures

Fabric Upgrade:
New windows and doors in classroom and science blocks; roof and wall insulation improved for envelope performance.

Lighting Upgrade:
LED lighting installed throughout to reduce energy demand.

HVAC Upgrade:
Heat pump system installed for efficient heating; ventilation improved via automated vent replacement.

Renewable Energy Integration:
30 kWp solar PV system (Solarwatt ECO 375W panels) added for on-site electricity generation.